

AMENDMENTS**In the Claims:**

Please amend the claims as follows. Clean copies of the amended claims follow, and a marked up version showing the changes to the claims is attached at the end of this amendment.

Please amend the claims to read as follows:

29. (Amended) A method of producing L- β -lysine, comprising:

- C¹
- (a) culturing a prokaryotic host cell comprising an expression vector that encodes lysine 2,3-aminomutase in the presence of L-lysine, wherein the cultured host cell expresses lysine 2,3-aminomutase, and
 - (b) isolating L- β -lysine from the cultured host cells.
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C²

31. (Amended) The method of claim 30, wherein the lysine 2,3-aminomutase has an amino acid sequence selected from the group consisting of (i) SEQ ID NO: 4, and (ii) a conservative amino acid variant of SEQ ID NO: 4.

C³

36. (Amended) The method of claim 29 wherein the vector that encodes lysine 2,3-aminomutase has a nucleic acid sequence of SEQ ID NO: 3.

C⁴

41. (Amended) The method of claim 40 wherein the L-lysine is contacted with the immobilized lysine 2,3-aminomutase for a sufficient amount of time to produce enantiomerically pure L- β -lysine.

C⁵

46. (Amended) The method of claim 37, wherein the lysine 2,3-aminomutase has an amino acid sequence selected from the group consisting of (i) SEQ ID NO: 4, and (ii) a conservative amino acid variant of SEQ ID NO: 4.
